

# Exhibit 1

CM WHAT IS CLAIMED IS:

1. A method for producing a mammalian peptide which comprises:  
growing plant cells containing an integrated  
sequence comprising,

a first expression cassette having in the direction of transcription (1) a transcriptional and translational initiation region functional in said plant cells, (2) a structural gene coding for said mammalian peptide, and (3) a termination region,

whereby said structural gene is expressed to produce said mammalian peptide; and

isolating said mammalian peptide.  
substantially free of plant cell components.

2. A method according to Claim 1, wherein said integrated sequence ~~includes~~ <sup>comprises</sup> a second expression cassette having in the direction of transcription (1) a transcriptional and translational initiation region functional in said plants, (2) a structural gene coding for a peptide which allows for selection of plant cells expressing said peptide, and (3) a termination region.

3. A method according to Claim 2, wherein said transcriptional and translational initiation region <sup>of said first expression cassette</sup> is derived at least in part from a transcriptional and translational initiation region of a Ti- or Ri-plasmid.

4. A method according to Claim 3, wherein said transcriptional and translational initiation region <sup>of said first expression cassette</sup> regulates expression of mannopine synthase, octopine synthase or nopaline synthase.

5. A method according to Claim 1, wherein said transcriptional and translational initiation

20  
region of said first expression cassette regulates  
expression of a plant gene.

5 6. A method according to Claim 1, wherein  
said integrated sequence ~~includes~~ <sup>comprises</sup> a boundary region  
from T-DNA.

7. A method for producing an interferon ✓  
which comprises:

10 growing plant cells containing an integrated  
sequence comprising

15 a first expression cassette having in the  
direction of transcription (1) a transcriptional and  
translational initiation region functional in said  
plant cells and derived from a region which regulates  
expression of a T-DNA gene, (2) a structural gene  
coding for an interferon, and (3) a termination region  
functional in said plant cells,

20 whereby said structural gene is expressed to  
produce said interferon, and

isolating said interferon substantially free  
of plant cell components.

25 8. A method according to Claim 7, wherein  
said integrated sequence ~~includes~~ <sup>comprises</sup> a second expression  
cassette having in the direction of transcription (1) a  
transcriptional and translational initiation region  
functional in said plant cells, (2) a structural gene  
coding for an enzyme which imparts antibiotic  
30 resistance, and (3) a T-DNA boundary.

9. A method according to Claim 8, wherein  
said first expression cassette transcriptional and  
translational initiation region regulates expression of  
35 the mannopine synthase gene of T-DNA.

10. An expression cassette comprising a DNA sequence having in the direction of transcription a transcriptional and translational initiation region functional in plant cells, a structural gene coding for a mammalian peptide, and a termination region functional in plant cells.

11. An expression cassette according to Claim 10 including joined to said DNA sequence a second expression cassette comprising a second transcriptional and translational initiation region functional in plant cells, a structural gene coding for a peptide providing a phenotypic property capable of selection in plant cells, and a termination region functional in plant cells.

12. An expression cassette according to Claim 11, ~~including~~ <sup>comprising</sup> a T-DNA boundary.

13. A DNA construct comprising a first expression cassette having in the direction of transcription a transcriptional and translational initiation region regulating the expression of mannopine synthase of T-DNA, a structural gene coding for  $\gamma$ -interferon and a termination region functional in plant cells, a second expression cassette comprising in the direction of transcription a transcriptional and translational initiation region regulatory the expression of octopine synthase of T-DNA, a structural gene coding for an enzyme imparting antibiotic resistance to plant cells, and a termination region functional in plant cells, and a T-DNA boundary.

## DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

## MOLECULAR FARMING

the specification of which ☒ is attached hereto or ☐ was filed on \_\_\_\_\_ as Application Serial No. \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable).

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a). I claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

## Prior Foreign Application(s)

COUNTRY	APPLICATION NUMBER	DATE OF FILING	PRIORITY CLAIMED UNDER 35 U.S.C. 119
			Yes _____ No _____
			Yes _____ No _____

I claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NO.	DATE OF FILING	STATUS
		<input type="checkbox"/> Patented <input type="checkbox"/> Pending <input type="checkbox"/> Abandoned
		<input type="checkbox"/> Patented <input type="checkbox"/> Pending <input type="checkbox"/> Abandoned

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) who are partners and associates in the firm of Townsend and Townsend to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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201	FULL NAME OF INVENTOR	Last Name GOODMAN 401	First Name Robert	Middle Name or Initial M.
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I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 201	Signature of Inventor 202	Signature of Inventor 203
Date	Date	Date

## DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

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201	FULL NAME OF INVENTOR	Last Name	First Name	Middle Name or Initial
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	POST OFFICE ADDRESS	Post Office Address	City	State or Country
202	FULL NAME OF INVENTOR	Last Name	First Name	Middle Name or Initial
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203	FULL NAME OF INVENTOR	Last Name	First Name	Middle Name or Initial
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	POST OFFICE ADDRESS	Post Office Address	City	State or Country

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 201	Signature of Inventor 202	Signature of Inventor 203
Date	Date	Date